

Claim Amendments

This listing of the claims replaces all prior versions and listing of the claims in the present application.

Listing of Claims:

1. (previously presented) A flat-type light-emitting device comprising:

(a) an envelope having an inner space and two inner surfaces that face each other;

the inner space being filled with a discharge medium;

(b) a phosphor layer on one of the two inner surfaces;

(c) a first electrode on the other of the two inner surfaces;

the first electrode including linear parts;

each of the linear parts having branches apart from each other at a first gap; and

(d) a second electrode on the other of the two inner surfaces adjacent to the first electrode;

the second electrode including linear parts;

each of the linear parts having branches apart from each other at a second gap;

wherein the linear parts of the first electrode and the linear parts of the second electrode are arranged alternately in a first direction,

wherein the phosphor layer continuously covers an entirety of the inner space overlying the linear parts of the first and second electrodes so that substantially all of the phosphor layer is excited by discharge paths defined between adjacent pairs of the linear parts of the first and second electrodes without scanning the first and second electrodes.

2. (previously presented) The device according to claim 1, wherein the discharge medium emits vacuum UV rays and the phosphor layer emits light due to the vacuum UV rays;

and wherein the envelope allows the light to penetrate through the envelope to the outside.

3. (canceled).

4. (previously presented) The device according to claim 2, wherein the envelope allows the light having a wavelength of 300 nm or greater to penetrate through the envelope to the outside at a transmittance of 50% or greater.

5. (original) The device according to claim 1, further comprising a photocatalyst layer formed on an outer surface of the envelope.

6. (previously presented) The device according to claim 1, wherein the first gap and the second gap are equal to d (mm) that satisfies a relationship of $0.5 \text{ mm} \leq d \leq G/2$, where G (mm) is a distance between the first inner surface of the envelope and the second inner surface thereof.

7. (original) The device according to claim 1, wherein the first electrode has an outermost linear part that has no branch and the second electrode has an outermost linear part that has no branch.

8. (original) The device according to claim 1, further comprising

a dielectric layer formed to cover the linear parts of the first electrode and the linear parts of the second electrodes; and

a protection layer formed on the dielectric layer.

9. (original) The device according to claim 1, wherein one of the branches of each of the linear parts of the first electrode is apart from an adjoining one of the branches of each of the linear parts of the second electrode at a dischargeable distance.

10. (previously presented) A light emitting device comprising:

two spaced apart substrates defining an inner space therebetween, said inner space being filled with a discharge medium;

a phosphor layer on an inner surface of one of said two substrates; and

first and second electrodes on an inner surface of the other of said two substrates,

said first electrode having a linearly extended first connecting part and plural first fingers extending generally perpendicular to said first connecting part at a first distance from each other, each of said plural first fingers having two parallel branches that are spaced apart a second distance from each other, the second distance being less than the first distance,

said second electrode having a linearly extended second connecting part that is generally parallel to said first connecting part and plural second fingers extending generally perpendicular to said second connecting part at a third distance from each other, each of said plural second fingers having two parallel branches that are spaced apart a fourth distance from each other, the fourth distance being less than the third distance, and

wherein said first and second fingers are interdigitated so that each of said first fingers is between a respective pair of adjacent ones of said second fingers,

wherein said phosphor layer is excited by discharge paths defined between adjacent pairs of said first and second fingers and continuously covers an entirety of said inner space overlying said interdigitated first and second fingers so that

substantially all of said phosphor layer is excited by the discharge paths.

11. (previously presented) The device of claim 10, wherein the second distance is at least 0.5 mm and no more than one half a height of the inner space between said two substrates, and wherein the fourth distance is at least 0.5 mm and no more than one half the height of the inner space between said two substrates.

12. (previously presented) The device of claim 11, wherein the second and fourth distances are equal and the first and third distances are equal.

13. (previously presented) The device of claim 10, wherein the first distance is two to sixteen times greater than the second distance.

14. (previously presented) The device of claim 10, wherein the third distance is two to sixteen times greater than the fourth distance.

15. (previously presented) The device of claim 10, wherein each of said first and second electrodes comprises an end finger that has only one branch, each said end finger being generally parallel to said first and second fingers.

16. (new) A flat-type light-emitting device comprising:

(a) an envelope having an inner space and an inner surface;

the inner space being filled with a discharge medium;

(b) a phosphor layer formed in the inner space of the envelope;

(c) a first electrode formed on the inner surface of the envelope;

the first electrode including linear parts, each of the linear parts having a first branch and a second branch apart from each other, the second branch being adjacent and parallel to the first branch; and

(d) a second electrode formed on the inner surface of the envelope, the second electrode including linear parts, each of these linear parts having a third branch and a fourth branch apart from each other, the fourth branch being adjacent and parallel to the third branch;

wherein each of the linear parts of the second electrode is arranged between two adjacent ones of the linear parts of the first electrode.

17. (new) The device according to claim 16, wherein the discharge medium emits vacuum UV rays and the phosphor layer emits light due to the vacuum UV rays;

and wherein the envelope allows the light to penetrate through the envelope to the outside.

18. (new) The device according to claim 16, wherein the envelope allows the light having a wavelength of 300 nm or greater

to penetrate through the envelope to the outside at a transmittance of 50% or greater.

19. (new) The device according to claim 16, further comprising a photocatalyst layer formed on an outer surface of the envelope.

20. (new) The device according to claim 16, further comprising

a dielectric layer formed to cover the linear parts of the first electrode and the linear parts of the second electrodes; and

a protection layer formed on the dielectric layer.